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Dated: _____ Signature: _____
(Richard H. Anderson)

Docket No.: 27702/10061
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jerome M. Klosowski et al.

Application No.: 10/718,233

Confirmation No.: 9906

Filed: November 19, 2003

Art Unit: 1714

For: ADHESION PROMOTERS FOR SEALANTS

Examiner: S. K. Poulos

DECLARATION UNDER 37 C.F.R. §1.132 OF
GARY WENTWORTH

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Now comes GARY WENTWORTH, PH.D., one of the named inventor of the invention disclosed and claimed in the above-identified application, and states as follows:

My education is as follows:

B.S. (Chemistry): Rensselaer Polytechnic Institute

Ph.D. (Organic Chemistry): Georgia Tech

2. My experience, relating to the subject matter of this patent application is as follows:

Thirty years in R&D in polymer related industries, including Textiles, Plastics, Coatings and Elastomers. Supervision of R&D groups ranging in size from 15 to 80 degreed professionals and technicians.

Ten years as Adjunct Professor of Chemistry at Roosevelt University of Chicago, teaching both Organic Polymer Chemistry and Physical Polymer Chemistry to students in the masters degree program.

Six years as a referee for the *Journal of Organic Chemistry*.

3. My patents and publication includes more than fifteen U.S. Patents and at least twelve publications in referred journals, all in the fields of polymer and organic chemistry.

EXHIBIT

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4. We have found, as shown in the data of the application in Tables I, II, III and IV (attached hereto), that the claimed sealant compositions, containing a combination of an adhesive resin with one or more esters of Formulas I, II, III and/or IV substantially increases the adhesion of substrates, such as concrete, EPDM rubber, Kynar®, glass, and PVC to the sealant compositions.

5. As shown in the highlighted page 32 of the subject patent application (Tables I, II and III), compared to a control (sealant composition without the adhesive resin/ester adhesion promoter combination), the claimed sealant composition was unexpectedly better than the control for adherence to concrete, EPDM rubber, KYNAR® and PVC, the control for the adherence as shown in the data to provide sufficient additional adhesion in cohesive failure (the composition tears) instead of the sealant tearing away from the substrate (adhesive failure). By the addition of the claimed adhesion promoter combination of adhesive resin and ester, the adhesion of the sealant composition went from adhesive failure to cohesive failure on:

- (1) CONCRETE, when added wet to a **silicone** sealant composition (Table I). From adhesive failure to cohesive failure.
- (2) CONCRETE, when added dry to an **acrylic** sealant composition (Table III). From adhesive failure to cohesive failure.
- (3) EPDM, when added wet to a **urethane** sealant composition (Table I). From adhesive failure to cohesive failure.
- (4) KYNAR®, when added dry to a **silicone** sealant composition (Table I). From adhesive failure to cohesive failure.
- (5) KAYNAR®, when added wet to a **urethane** sealant composition (Table II). From adhesive failure to cohesive failure.
- (6) PVC, when added both dry and wet to both a **urethane** sealant composition (Table II) and an **acrylic** sealant composition (Table III). From adhesive failure to cohesive failure.
- (7) GLASS, when added wet to a **urethane** sealant composition (Table II). From adhesive failure to cohesive failure.

6. It was extremely surprising to me that the addition of the ester(s) of claimed Formula I-IV (together with an adhesive resin) resulted in increased adhesion of the substrates to the sealant compositions since, as stated in Oshiyama '381 (particularly at col. 1, lines 37-45) such esters are lubricating agents which prevent the adhesion or sticking to contacted objects.

7. When this discovery was first made, the claimed esters were added to a rubber composition reluctantly, in an attempt to provide more flexibility to a rubber conveyor belt composition with the expectation that the adhesion between the reinforcing cord and the rubber composition would decrease. The resulting substantial increase in adhesion was most unexpected.

8. These statements made herein of my own knowledge are true, and all statements made upon information and belief are believed to be true, and further these statements are made with the knowledge that willful false statements and the like, so made are punishable by fine or imprisonment, or both, under section 1001 of title 10 of the United States Code and such willful false statements may jeopardize the validity of the instant patent application or any patent issuing thereon.



Gary Wentworth